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United States  
Department of  
Agriculture

Agricultural  
Research  
Service

South Atlantic Area  
Center for Medical,  
Agricultural and  
Veterinary Entomology

1600/1700 SW 23<sup>rd</sup> Drive  
P. O. Box 14565  
Gainesville, FL 32604

Gail M. Taylor-Russell  
Russell & Russell, L.L.P.  
8810 Business Park Drive, Suite 100  
Austin, TX 78759-7437

Dear Ms. Taylor-Russell,

As research entomologist for the USDA, my research objectives include identification of innovative surveillance technologies for mosquitoes and biting midges, and development of novel control technologies (e.g. removal trapping) for adult mosquitoes and biting midges. Since working with these goals from the early eighties, I have had the opportunity to work with virtually all of the hardware products available commercially as well as those only available as prototype units. In this mix of products, I have tested bug zapper traps from several manufacturers, including DeYorco's bug zapper with a fan.

I began testing devices developed by American Biophysics Corp. in 1994, and have tested counterflow technology products under a non-disclosure agreement since June of 1996. To date, I can attest that there has not been another trapping device tested that achieves the level of performance of American Biophysics' counterflow technology. When other traps are compared to the counterflow traps, the numbers of captured target insects, is significantly higher in the counterflow devices. This result can only be ascribed to the novel geometry that these traps utilize.

Sincerely,

*Daniel L Kline*

Daniel Kline, PhD  
Research Entomologist



**MOSQUITO MAGNET®**  
*Fatal Attraction for Mosquitoes*

## **MOSQUITO MAGNET® INDEPENDENT STUDIES FACT SHEET**

### **CAYMAN ISLANDS MOSQUITO RESEARCH & CONTROL UNIT, CAYMAN ISLANDS (JULY 2002)**

#### ***Abstract:***

- The Mosquito Magnet® Liberty was tested against the Coleman Mosquito Deleto™ and the Applica SonicWeb™ over a nine-day period in a mosquito infested mangrove swamp in the Cayman Islands.

#### ***Results:***

- The Mosquito Magnet® Liberty caught 7,161 mosquitoes, nearly 200 times more mosquitoes than Coleman's Mosquito Deleto™, which caught 37 mosquitoes. The SonicWeb™ caught only five.
- The Mosquito Magnet® Liberty caught nine mosquito species, which is 300% more than the other traps tested.
- In further testing in an urban area with a relatively low mosquito population, the Liberty trapped 286 mosquitoes over a 17-day period compared to only five trapped by the Mosquito Deleto™. The SonicWeb™ was not tested in the urban setting due to the lower number of mosquitoes collected in the area with a dense mosquito population.

### **FLORIDA A&M UNIVERSITY, PUBLIC HEALTH ENTOMOLOGY RESEARCH & EDUCATION CENTER, PANAMA CITY, FLORIDA (SUMMER 2001 AND SUMMER 2002)**

**(2001)**

#### ***Abstract:***

- The Mosquito Magnet® Pro was tested against the Flowtron Inc. Mosquito PowerTrap (also known as the Mosquito Eliminator) in a tropical salt marsh in Panama City, Florida.
- Traps were randomly assigned to four sites separated by distances of at least 300 ft., and operated for 16 hours.

#### ***Results:***

- The Mosquito Magnet® Pro captured 10 times more mosquitoes than the Mosquito PowerTrap.

**(2002)**

#### ***Abstract:***

- In a second test, the mosquito-capturing prowess of the Mosquito Magnet® Liberty was tested against seven other commercial traps on the market including the Mega-Catch™ and the SonicWeb™.

#### ***Results:***

- The Mosquito Magnet® Liberty out caught four of the commercial models by 6 to 1 and it out caught the other models by at least 2.5 to 1.
- The Liberty also captured more species of mosquitoes than any other trap tested.

**DR. L.R. TAYLOR, TAYLOR ENVIRONMENTAL AND BIOLOGICAL SPECIALISTS  
Holiday Township, Marloth Park, Eastern Mpumalanga, RAS  
(July 2002)**

**Abstract:**

- The efficacy of the Mosquito Magnet® Pro was examined in the eastern Mpumalanga province of South Africa in less desirable winter conditions over a period of 6 days.
- The Mosquito Magnet® Pro was placed in two localities, a mixed woodland area with standing water in close proximity and a developed commercial facility comprising of a restaurant with an open deck overlooking a swimming pool and game watering hole.

**Results:**

- The Pro successfully captured biting midges and mosquitoes from six different taxa in limiting winter conditions. This suggests that the unit will be highly effective in spring, summer and autumn conditions.
- The capture rate for the Mosquito Magnet® Pro proves its ability to attract biting insects.
- The unit is able to capture taxa in proportion to that found to land on and bite human hosts. **In addition, mosquito landing and biting rates diminish in the presence of the operating machines.**

**STUDY BY DR. JEFFERY VAUGHN, DEPARTMENT OF BIOLOGY,  
UNIVERSITY OF NORTH DAKOTA, GRAND FORKS NORTH DAKOTA (SUMMER 2002)**

**Abstract:**

- The study examined the capturing ability of the Mosquito Magnet® Pro and Liberty versus the New Jersey light trap over a 44-day period in two similar residential neighborhoods.

**Results:**

- The Mosquito Magnet® trap caught 20 to 30 times more mosquitoes than the New Jersey light trap.
- The Mosquito Magnet® reduced biting intensity in treated neighborhoods under certain conditions.

**U.S. ARMY MEDICAL COMMAND, THE CENTERS FOR DISEASE CONTROL, REPUBLIC OF  
KOREA (SUMMER 2000)**

**Abstract:**

- Field tests of seven different mosquito traps were conducted where recent outbreaks of malaria had occurred near the U.S. base at Camp Greaves in South Korea.
- The tests were conducted in areas that hadn't been sprayed and that had large known populations of mosquitoes.

**Results:**

- According to the *Journal of the American Mosquito Control Association, September 2001*, the Mosquito Magnet® captured three times more mosquitoes than the next most effective trap, and over 13 times as many as others - even other traps that use CO<sub>2</sub> and octenol attractants.